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International comparison of broadband prices in November 2007

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## **Summary**

In order to perform the price comparisons presented ahead, one collected the values of the monthly fees of the fixed and mobile broadband offers in force, respectively, in November and July 2007, in the E.U.15 (in the case of fixed broadband, data was only collected in 13 of the E.U.15 countries).

These figures where compared, excluding VAT or any correction regarding purchasing power parity. This is considered to be the most appropriate method to evaluate the efficiently and offer conditions of operators in Portugal, since it suffers no impact from factors beyond the service providers.

The main conclusions of this exercise where the following:

- In November 2007, the minimum price for broadband in Portugal was 32.6 per cent bellow the average of the countries taken into account and was similar to those practiced in Austria, Sweden and Denmark, countries which have a higher (fixed) broadband penetration. The minimum price practiced in Portugal was the 3rd lowest one and, for the historic operator, the 4th lowest one among its counterparts from the remaining countries.
- If instead of the minimum price, one considers the simple average of the minimum prices practiced by the several ISP for the several transmission speeds, Portugal still stands among the first countries with lower prices in most of the download speeds. For speeds between 2 and 8 Mbps, Portugal ranks between 3rd and 5th with prices bellow the average of the remaining countries, reaching a difference of 46.2 per cent. Only in the case of the 1 Mbps offers does Portugal show prices above the average of the remaining countries.
- The price of the most used offers (4 Mbps) is about 46 per cent bellow the average of the considered countries, being the 4th lowest one (two steps up the in ranking from the previous period)

On the other hand, between June 2005 and November 2007, the price of the 4 Mbps offers in Portugal decreased around 36 per cent.

- Most monthly fees of the historic operator's offers in Portugal stand bellow the average, in the 4th or 5th place of their respective rankings. These results are supported by the data collected by Teligen.
- Mobile broadband monthly fees practiced in Portugal are considerably lower than the prices of the offers identified in the remaining U.E.15 countries, placing the country in third on these rankings, between 36 per cent and 49 per cent bellow the average.

## 1. Introduction

Since June 2005 ICP-ANACOM has been collecting data on broadband offers based on ADSL, cable modem and fibre optics within the E.U.15 and conducting international comparisons of subscription prices for this service, excluding VAT or any correction regarding purchasing power parity<sup>1</sup>. Chapter 2 presents the results of these comparisons regarding November 2007.

The growing importance of broadband at the national and international level made us include on this study all the relevant information available for the comparison of prices of this type of services.

For the first time, we present values calculated on the basis of the methodology and data produced by Teligen. These calculations, although limited to the historic operators' ADSL offers, help to strengthen the analysis, since they take several Internet usage baskets into account.

On the other hand, due to the "explosion" of mobile broadband in Portugal, we also present for the first time, in chapter 3, price comparisons of the mobile broadband offers practiced in the E.U., under an approach similar to the one used with fixed accesses.

The methodology used to calculate these results is described in the Annex.

## 2. International comparisons of fixed broadband prices (November 2007)

As usual, 3 different indicators where used to assess the level of broadband prices practiced in Portugal:

- Minimum broadband price, which corresponds to the lowest monthly fee practiced in the considered countries (regardless of the transmissions speed associated to it);
- The simple average of minimum prices practiced by the several ISPs for the several transmissions speeds;
- Variation interval for the typical offer in Portugal (4 Mbps, in this case).

<sup>1</sup> Albeit the existence of other valid options in terms of methodology, this one is considered to be the most appropriate to evaluate the efficiently and offer conditions of operators in Portugal, since it is not influenced by the tax policy decisions of the several Member States or by the different purchasing power levels, factors beyond the service providers.

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A section specifically dedicated to the results obtained by Teligen is also included here, regarding the prices of the historic operators' offers.

# **Minimum Prices of Broadband**

In November 2007, the minimum price of broadband in Portugal was 32.6 per cent bellow the average of the countries taken into account and was similar to those practiced in Austria, Sweden and Denmark, countries which have a higher (fixed) broadband penetration. Thus, based on this indicator, Portugal is the third country with the lowest broadband prices. The minimum price practiced by the historic operator in Portugal was the 4th lowest one among the operators.

Table 1 - Minimum monthly fee for broadband - November 2007

Broadband monthly fee	Minimu	m Price		Minimum Price - Historic Operator		
(€ excluding VAT)	Price	Ranking	Price	Ranking		
Germany	12.06	6	15.03	3		
Austria	8.25	2	8.25	1		
Belgium	14.05	10	26.07	13		
Denmark	5.37	1	17.09	7		
Spain	20.00	13	21.90	10		
France	12.46	8	20.82	9		
Netherlands	12.56	9	16.76	6		
Ireland	15.66	11	16.52	5		
Italy	8.29	4	8.29	2		
Luxembourg	17.39	12	22.61	11		
Portugal	8.26	3	15.28	4		
United Kingdom	12.35	7	22.78	12		
Sweden	8.57	5	17.23	8		
Total/Average excluding						
Portugal	12.25		17.78			
Portugal's % deviation						
regarding average	-32.6%		-14.1%			

Source: ICP-ANACOM.

Currently, the minimum price practiced in Portugal regards an alternative operator's ADSL offer.

This indicator is important since it gives an idea of the lowest price at which an Internet access offer already considered to be broadband is available in each country; however, one ends up comparing prices of offers with different speeds, and therefore the importance of the following indicators.

## Average price by access speed

If instead of the minimum price, one considers the simple average of the minimum prices practiced by the several ISPs for the several transmission speeds, Portugal still stands among the first countries with lower prices in most of the download speeds.

In fact, for speeds between 2 and 8 Mbps, Portugal ranks between 3rd and 5th with prices bellow the average of the remaining countries, reaching a difference of 46.2 per cent. Only in the case of the 1 Mbps offers does Portugal show prices above the average of the remaining countries.

Table 2 – Average of the minimum prices of broadband by access speed – November 2007

Broadband monthly fees in November 2007 (€excluding VAT)	1 Mbps		2 Mbps		4 Mbps		8 Mbps	
Germany	16.93	3	21.21	6	21.53	2	-	
Austria	8.25	1	22.02	7	33.25	9	41.58	8
Belgium	33.11	10	-		25.46	5	29.75	4
Denmark	20.25	6	24.93	9	30.81	7	45.40	10
Spain	22.93	9	36.00	10	120.00	11	150.57	11
France	20.82	7	-		-		27.09	3
Netherlands	-		-		22.37	4	43.24	9
Ireland	17.44	5	24.06	8	71.86	10	35.12	7
Italy	-		16.58	1	19.74	1	-	
Luxembourg	-		19.71	4	29.57	6	34.13	6
Portugal	21.95	8	19.15	3	21.86	3	31.36	5
United Kingdom	16.45	2	18.14	2	31.65	8	19.72	1
Sweden	17.23	4	20.17	5	-		23.63	2
Average excluding Portugal	19.27		22.54		40.62		45.02	
Portugal's % deviation regarding average	13.9%		-15.0%		-46.2%		-30.4%	

Source: ICP-ANACOM.

Although less representative and not available in most countries, it should be mentioned that Portugal presents prices below the average of the remaining three in the 256Kbps offers, and above de average of the remaining two in the 24 Mbps offers.

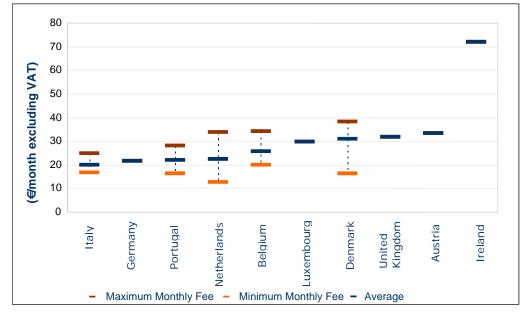
## Prices of the 4 Mbps offers

According to the information available, the offers most used currently in Portugal should be the 4 Mbps offers. For this reason, we following present some additional elements on these offers' prices.

As shown on the previous table, the average price of the 4 Mbps offers in Portugal is about 46 per cent bellow the average of the countries considered, being the fourth lowest one (a two place improvement regarding July 2007).

Surely the average of the remaining countries continues to be influenced by the high price in Spain, but this not only does not change Portugal's ranking regarding the remaining countries, as it does not considerably change the average deviation (which would still be very reasonable, -31.3 per cent, if that country was excluded).

Considering the range of variation<sup>2</sup> and the average of prices of the 4 Mbps offers in the considered countries, one can confirm that the prices practiced in Portugal are globally bellow the European average levels.



Graph 1 - Range of variation and average of prices of 4 Mbps offers

Source: ICP-ANACOM

On the other hand, between June 2005 and November 2007, the price of the 4 Mbps offers in Portugal decreased around 36 per cent.

<sup>&</sup>lt;sup>2</sup> The variation range presented does not take into account the prices practiced in a country for each throughput category, but only the most competitive prices of each ISP of a given country. This way, one excludes more expensive offers that include extra options (e.g. upload speeds or higher traffic limits) which could distort results.

## Prices of the historic operators' offers

Considering the importance of the historic operators in terms of market share, we following compare the prices practiced by each country's historic operators.

It should be mentioned that, unlike the data presented in the previous tables, this table's prices do not necessarily correspond to the download speeds shown; rather, they are the minimum prices paid by consumers to obtain the shown download speed (i.e. some of the prices shown may belong to offers with speeds above those shown). This hypothesis was used to increase representatively.

Most monthly fees of the historic operator's offers in Portugal stand always bellow the average, in the 4th or 5th place of the ranking.

Table 3 – Minimum price of broadband by access speed: historic operators - November 2007

Broadband monthly fees in November 2007 (€excluding VAT)	256 Kbps		2 Mbps		8 Mbps	
Germany	15.03	3	17.68	3	34.47	7
Austria	8.25	1	14.92	1	33.25	6
Belgium	26.07	13	34.30	12	51.36	11
Denmark	17.09	6	27.84	11	46.65	10
Spain	21.90	10	36.00	13	44.90	9
France	20.82	8	25.00	10	25.00	3
Netherlands	20.97	9	20.97	5	-	
Ireland	16.52	5	24.79	9	-	
Italy	8.29	2	16.63	2	20.79	1
Luxembourg	22.61	11	22.61	6	34.87	8
Portugal	15.28	4	20.65	4	29.40	5
United Kingdom	22.78	12	22.78	7	22.78	2
Sweden	17.23	7	24.15	8	25.88	4
Average						
excluding						
Portugal	18.13		23.97		34.00	
Portugal's %						
deviation regarding average	-15.7%		-13.8%		-13.5%	

Source: ICP-ANACOM.

It should also be pointed out that Portugal and Sweden are the only two countries (among those taken into account) where the historic operators have 24 Mbps offers. In this case, in Portugal the price is about 50 per cent higher than the price in Sweden.

# **Teligen Results**

The results of the comparison of prices of the historic operators' offers are supported by the results of Teligen's T-Connect application, concerning October 2007, which makes it possible to perform comparisons of prices of the historic operators' ADSL offers using a basket approach. On the other hand, these results take 28 countries into account, all those of the EU and also Switzerland, Norway and Iceland.

According to the methodology and the data collected by Teligen, and using the hypotheses described in the annex, in general, the prices of the ADSL offers of the historic operator in Portugal are bellow de average (Vd. **Table 4**). In terms of rankings Portugal stands behind the Eastern Europe countries and among the first E.U.15 countries, except for the case of Basket 6 (100 Gbps/month of usage).

Table 4 – Monthly invoice of the historic operator's residential ADSL offers in Portugal:

Deviation regarding the average and ranking

	Basket 1	l (1 Gbps)	Basket 2 (2 Gbps)		Basket 3 (5 Gbps)	
	% deviation	Ranking	%	Ranking	%	Ranking
	regarding		deviation		deviation	
	the		regarding		regarding	
	average		the		the	
Download speed			average		average	
0 - 1 Mbps offers	-26.3%	5	-39.8%	4	-56.2%	6
1 - 4 Mbps offers	-10.2%	10	-12.9%	10	-16.9%	9
4 - 10 Mbps offers	-24.1%	8	-24.1%	8	-24.1%	8
Offers > 10 Mbps	-4.6%	8	-4.6%	8	-4.6%	8

	Basket 4 (5 Gbps)		Basket 5 (10 Gbps)		Basket 6 (100 Gbps)		
	% deviation	Ranking	%	Ranking	%	Ranking	
	regarding		deviation		deviation		
	the		regarding		regarding		
	average		the		the		
Download speed			average		average		
0 - 1 Mbps offers	-58.0%	5	-	-	-	-	
1 - 4 Mbps offers	-16.9%	9	-24.6%	9	1.5%	19	
4 - 10 Mbps offers	-24.1%	8	-24.3%	8	-25.8%	8	
Offers > 10 Mbps	-4.6%	8	-4.6%	8	-4.6%	8	

If we access the basic data used by Teligen and only compare the monthly fees of the several offers of the historic operator in Portugal in October 2007<sup>3</sup>, we

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<sup>&</sup>lt;sup>3</sup> All other variables with impact on the price of the broadband offers where excluded besides the download speed.

conclude that the monthly fees of the residential offers of the historic operator in Portugal are always bellow the average of the prices practiced by its counterparts from the remaining E.U.15 countries (Vd. **Table 5**), except for the case of the 24 Mbps offers, as previously mentioned.

Table 5 – Monthly fees of the residential ADSL offers of E.U.15 historic operators providing 2 Mbps and/or 8 Mbps offers

	2 Mbps	8 Mbps
Austria	24.92	
Denmark	32.10	50.89
Finland	26.98	34.34
France		25.00
Germany	25.63	
Greece	23.30	37.00
Ireland	24.79	
Italy	19.92	
Luxembourg	4.35	10.00
Portugal	20.65	29.40
Spain	74.98	150.57
Sweden	26.94	28.69
United Kingdom		21.98
Average excluding Portugal	28.39	44.81
Portugal's deviation regarding		
the average	-27%	-34%

Unit: Euro excluding VAT

## 3. International comparisons of mobile broadband prices (July 2007)

Data was collected regarding 138 mobile broadband tariff schemes practiced in the E.U.15 countries in July 2007.

Some elements of the available offers here compared on the basis of the collected data, namely the download speeds and traffic limits, with the purpose of evaluating the diversity of the offers existing in Portugal.

## **Download speeds**

Regarding the download speeds provided in the E.U.15 countries, 384 Kbps and 3.6 Mbps are the most common transmission throughputs. The highest throughput is 7.2 Mbps.

35.0% 30.0% 25.0% 20.0% 15.0% 10.0% 5.0% 0.192 0.384 0.512 0.64 1 1.5 1.8 3 3.6 7.2

Graph 2 – Distribution of mobile broadband offers in the E.U.15 countries by transmission throughput – July 2007

Source: ICP-ANACOM.

In Portugal there are 384 Kbps, 640 Kbps, 1.8 Mbps, 3.6 Mbps and 7.2 Mbps offers available. Therefore, one concludes that the offers provided in Portugal present transmission throughputs similar to those existing in the remaining E.U.15 countries.

## Traffic limits / included traffic

Concerning the existing traffic limits, 1 GB and 5 GB are the most common traffic limits in the E.U.15, being available in 8 countries. It should be mentioned that there are 5 countries with unlimited offers.

The following graph shows the distribution of the offers by traffic limit.

35% 30% 25% 20% 15% 10% 5% 0% < 100 <=500 1 GB < 5 GB 5 GB >5 GB Unlimited MB MB

Graph 3 – Distribution of mobile broadband offers in the E.U.15 countries by traffic limit – July 2007

Source: ICP-ANACOM.

In Portugal there are offers with 1 GB, 2GB, 5 GB and 6 GB traffic limits. However, there are no unlimited offers.

## Monthly fees of mobile broadband

The following table shows the monthly fees of mobile broadband practiced by mobile operators in the E.U.15 countries. Results are shown by traffic limits (or included traffic), since this was considered to be the most important variable in order to segment the several offers in terms of price. Comparisons are presented for the traffic limits practiced in Portugal.

As shown, prices practiced in Portugal are considerably lower than the prices of the offers identified in the remaining U.E.15 countries, placing the country in third on these rankings, between 36 per cent and 49 per cent bellow the average.

Table 6 – Minimum monthly fees of mobile broadband offers in E.U.15 countries with offers with transmission throughputs similar to those provided in Portugal – July 2007

	Traffic Limits					
	1	GB	5-6	GB		
	Price	Ranking	Price	Ranking		
Germany			21.55	2		
Austria	16.67	1	45.83	6		
Denmark	43.01	6				
Spain	25.86	4	50.00	7		
France	58.53	8				
Greece			59.66	8		
Netherlands	38.00	5				
Ireland			33.05	4		
Italy	16.67	1	15.83	1		
Luxembourg			43.48	5		
Portugal	18.60	3	24.71	3		
United Kingdom	56.99	7				
Average excluding						
Portugal	36.53		38.49			
Deviation regarding the						
average	-49.1%		-35.8%			

Unit: Euros excluding VAT.

## ANNEX - Methodology

#### 1) Comparisons of fixed broadband prices

Sample made up of 650 offers from 83 ISPs from 13 EU15 countries. Greece was excluded from this analysis due to the weak implementation of the service in this country, and Finland due to difficulty in collecting information.

For each one of the analysed countries, the ISPs representing at least 70-80 per cent of the market were identified. For this purpose, documents of the European Commission, the websites of national regulators, the reports and accounts of some operators and press articles were consulted. In some situations, it was not possible to determine the market share of the ISPs and in these cases Internet search engines were used.

All the components that constitute the selected offers were collected. However, it was assumed that the decision to subscribe to broadband would be incremental (i.e. the cable modem broadband subscriber already has cable TV, the ADSL broadband subscriber is already an FTS customer, etc...), and it was considered that a new subscriber would choose the options that would keep the monthly fee to a minimum (i.e. if there is a discount for payment by bank transfer, the subscriber will choose payment by bank transfer).

Offers with less than 256 kbps downstream speeds and time-based offers were excluded during the calculation of results.

It should be noted that the results presented only refer to the monthly fee (not promotional values). Besides discounts and promotions, the following variables were not taken into account: installation and sign-up costs; equipment prices (not included in offers); traffic limits; upstream speed; number of mailboxes, space for mailbox, offer of web hosting space; software offers; equipment offers (e.g. MP3 reader); multimedia applications offers; training courses; offers connected to PC sales.

Data collection took place in November 2007.

#### 2) Data collected from Teligen's T-Connect application

Teligen is a consulting firm that provides information on the prices of electronic communications services to the OECD and to the European Commission.

In October 2007, Teligen launched the T-Connect service, which makes it possible to perform international comparisons of prices of ADSL broadband Internet access offers. The collected data is limited to the offers of the historic operators of the E.U., Switzerland, Norway and Iceland.

T-Connect makes it possible to perform price comparisons using usage Baskets (defined in terms of traffic volume, usage profile during the day period, number of usage hours per month).

It is equally possible to take into account, not only the monthly fees but also the installation/sign-up prices and any other usage prices, such as the price for traffic over the traffic limits.

The results presented on the current report where calculated on the basis of the residential customers' monthly invoices, using the usage profiles and usage parameters defined by Teligen (i.e. distribution of traffic by hours of the day, number of usage hours, monthly traffic), and are excluded of VAT. Purchasing power parities were not considered.

#### 3) Comparison of mobile broadband prices

Data was collected on 138 mobile broadband residential tariff schemes practiced by the E.U.15 countries in July 2007.

The monthly fees of the several available offers are compared. Results are shown by traffic limits (or included traffic), since this was considered to be the most important variable in order to segment the several offers in terms of price. Comparisons are presented for the traffic limits practiced in Portugal.

The values presented are the values really paid by customers (i.e. without purchasing power parity), excluding VAT.